

PUBLIC HEALTH EDUCATION, PHILATELY & MEDICAL HISTORY: THE 1982 ZIMBABWE STAMPS COMMEMORATING THE DISCOVERY OF THE TUBERCLE BACILLUS

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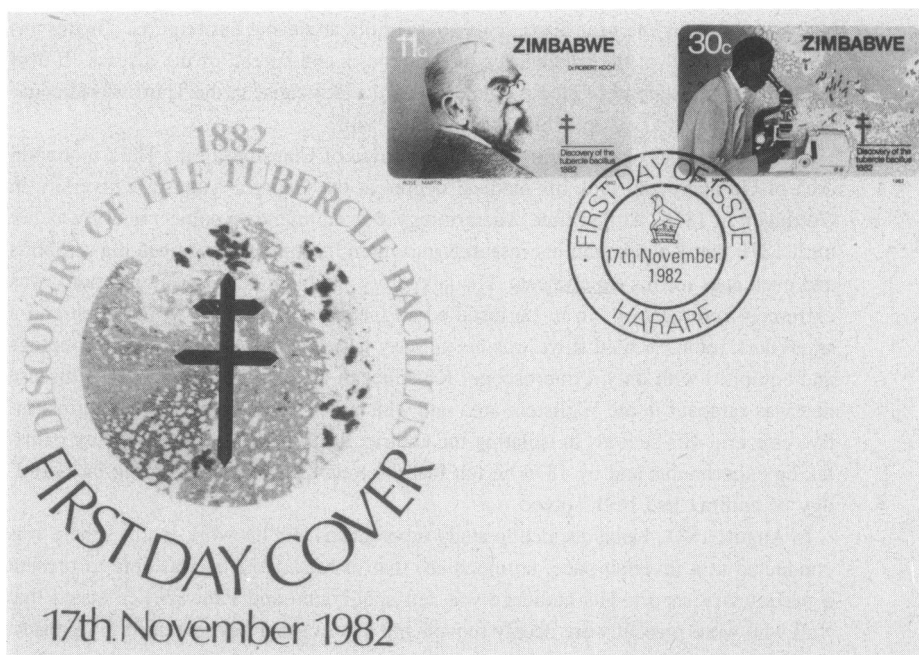
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IN 1982 the Posts and Telecommunications Corporation of Zimbabwe issued two stamps commemorating Koch's discovery of the tubercle bacillus. A first-day cover is reproduced here from the copy that I recently gave to the Library of The New York Academy of Medicine. A card enclosed in each first-day cover contains both modern public health information and an accurate and readable account of Koch and his discovery. The same text appeared in the brochure that announced the availability of the covers. This praiseworthy combination of public health education, medical history and philately seems well worth reprinting:

The discovery of the bacillus of tuberculosis in 1882 by Dr. Koch was hailed enthusiastically by the medical world as a tremendous breakthrough in eliminating this ancient scourge as a major public health hazard. For this Dr. Koch was feted and honoured by many countries. Why then, after 100 years, is the number of tuberculosis cases in the world on the increase rather than on the decline? Highly effective drugs and vaccine, making TB a preventable and curable disease, have been available to all countries for more than 30 years yet the disease continues to be highly prevalent in many. According to Dr. H. Mahler, Director General of the World Health Organisation, progress has been agonizingly slow. In the majority of developing countries, he says, there has been little or no improvement in the epidemiological situation. Between four and five million highly infectious cases emerge each year and the disease brings death to at least three million persons annually. Even in countries with highly developed health care, TB remains a serious risk for disadvantaged groups.

What causes TB? The answer is a combination of socio-economic as well as biological factors. Undernutrition, inadequate housing, poor hygiene, lack of water, the debilitating effects of acute infections and diarrhoea coupled with ignorance and apathy all contribute directly or indirectly.

In Zimbabwe, TB control became a major Ministry of Health programme in the 1950s when it was observed that the incidence of tuberculosis was increasing annually reaching 120 per 100,000 of the population in 1959. The introduction of TB control



reduced this figure by half in the following ten years but the success of the system was partially disrupted in the 1970s because of the war situation.

Since Independence in 1980, every effort has been made by the Ministry of Health to regain lost ground. TB specialists have been appointed in each of the five provinces co-ordinating the prevention and treatment of the disease which previously was carried out independently by many different hospitals attached to missions, mines and government.

TB control is a three-pronged attack:

- (a) B.C.G. vaccination,
- (b) case finding and
- (c) efficient treatment and rehabilitation.

The attack has been most successful and it is now policy for maternity units to B.C.G. all new-born babies. An expanded programme of immunization is now under way in Zimbabwe which will reach older children and adults and this will use the intradermal vaccination technique. TB patients in Zimbabwe receive free travel warrants to attend reviews and all treatment is provided free of charge.

Another organisation in Zimbabwe that does much to further the fight against TB is R.A.P.T. (Rehabilitation and Prevention of Tuberculosis). This has been in existence since 1954 and is largely supported by public donations. R.A.P.T. has been instrumental in keeping the fight against TB well advertised and was responsible for funding a Tuberculosis Reference Library which plays a key role in the diagnosis of tuberculosis and tuberculosis research. Its National Headquarters are in Bulawayo.

The target of the World Health Organisation is to completely eliminate TB as a major

health problem by the year 2000. This goal is fully attainable but requires a better understanding of all of the true causes of the genesis and spread of the disease. It also requires the full support of all governments, particularly those in the Third World countries, if the W.H.O. is to achieve its ultimate aim.

Dr. Robert Koch was born in 1843 in the town of Clausthal in the Harz mountain area of Germany and took his medical degree at the Georgia-Augusta University in Gottingen in 1866. At that time, bacteriology was an unknown subject and it was not until 1870 that Koch began his research into microbiology using guinea pigs, rabbits and even apes for his experiments. His laboratory, adjoining his consulting room, was extremely rudimentary. In it, he installed an incubator, a sink, a work bench and a small dark room. A tiled stove was his autopsy table! In these primitive surroundings and equipped with only a microscope, Koch began his studies on anthrax—a disease that was rampant in the Wollstein area and which was in the scope of his administrative concern. His success in isolating the anthrax bacilli came only after many painstaking experiments and by 1876 he felt that the major problems regarding the aetiology of anthrax had been solved.

In August 1881, Koch decided to study tuberculosis and his work in this sphere was conducted at a feverish pace, so much so, that in May 1882 he was able to present a preliminary report. His audience was left spellbound and Paul Ehrlich stated that “all who were present were deeply moved and that evening has remained my greatest experience in science.”

In addition to anthrax and tuberculosis, Koch also made successful studies into the causes of rinderpest, malaria, bubonic plague, cholera and trypanosomiasis and in the course of these studies he visited Africa on a number of occasions. On his 60th birthday in 1902 he visited Zimbabwe (then Rhodesia) combining business with pleasure and mixing an archaeologic trip with microbiology.

For his magnificent contribution to medical science he was honoured in 1905 when he was awarded the Nobel Prize for medicine.

Dr. Robert Koch was an extremely modest man and without any affectations. On the 27th of May 1910 he died suddenly of a heart attack leaving humanity with an immense inheritance. His discoveries and achievements represent the greatest progress in medicine of the 19th century and place him among the greatest benefactors of mankind.

It is interesting to note, in conclusion, that Koch's *Gesammelte Werke* (Leipzig, 1912, v. 2, part 2, pp. 748-98) contains five articles based on the work he did on African coast fever. All of those articles appear to have been written in Bulawayo (where Koch celebrated his 60th birthday), and one of them first appeared (presumably in English) in the *Bulawayo Chronicle*, a newspaper that is still published.